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Researching Educational Landscapes and Their Refigurational Spacing: Perspectives From Educational Science and Urban Planning

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Key words: refiguration of spaces; cross-cultural comparison; actor-network theory (ANT); educational spaces; educational landscapes; leitbild; mixed methods; narrative maps; group discussion; documentary method

Abstract: In Germany, a much-cited concept in recent years has been that of *lokale Bildungslandschaften* [local educational landscapes]. In this article, we focus on socio-spatial educational landscapes in the arrangement of a campus, which links the actors of education and urban planning to a specific leitbild, meaning a guiding principle in physical form and programmatic action. Therefore, an educational space designated as a campus includes constitutive dimensions of educational practices and a spatial reorganization of educational conditions, which are still to be discovered and investigated. We center our analysis on the perspective of children and young people as the main target group of this leitbild, as well as the perspective of the professional actors. In the following article, we give a brief overview of the characteristics of socio-spatial educational landscapes. We focus on the appropriation and atmospheres of access points and transitions, as well as patterns of use and spatial perception. After analyzing the ongoing development processes of socio-spatial educational landscapes as a campus, we adopt an internationally comparative perspective to research them.

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1. Educational Spaces and Spatiality

In a comprehensive understanding of education—which includes both formal and non-formal learning processes and formal and non-formal educational settings—we see that educational processes are influenced by space and that education plays a role in constituting space. WATSCHINGER and KÜHEBACHER (2007) described *space as the third pedagogue* in addition to the learning group and the pedagogical reference person. For urban planners, educational institutions are relevant social infrastructures. Since the 1990s, there has been an increasing tendency in Germany toward a municipalization of education, meaning that local authorities—municipalities, districts—have become increasingly responsible for coordinating and managing education, which includes acquiring general and administrative funding (COELEN, HEINRICH & MILLION, 2019; DEUTSCHER STÄDTETAG, 2007, 2012). This development has led to more integrated, municipal education planning processes involving urban planning aspects in Germany. [1]

Educational researchers have long neglected space and spatiality (DIRKS & KESSL, 2012), although in many other research disciplines a spatial turn started in the mid-1990s. Particularly for schools, the understanding of space has shifted with regard to the perception and design of educational settings and socio-spatial appropriation processes (BÖHME, 2009; OPP, 2010). The communication of new ideas of space is also gaining in importance (FRITSCHE, RAHN & REUTLINGER, 2011). At the same time, the spatial turn—especially in connection with the ongoing reorganization of social and educational policy and the associated readjustment strategies in the field of education and urban planning—has been leading to a spatial reorganization of educational settings (DIRKS, 2016; DIRKS & KESSL, 2012). According to authors such as KESSL and DIRKS, this new focus on the spatial dimension within educational science in turn requires an appropriate systematic and explicit consideration of the constitutive dimension of educational practice and the spatial reorganization of educational conditions (DIRKS, 2016; KESSL, 2016). [2]

While quantitative spatial requirements and, in particular, access to infrastructures have been the subject of research in planning sciences since the 1970s, qualitative approaches (LIBBE, KÖHLER & BECKMANN, 2010)—including pedagogical architecture, architectural training, and the participation of children and young people in creating the built environment, as well as education as a factor in social urban development—are only now increasingly being considered (MONTAG STIFTUNG JUGEND UND GESELLSCHAFT & MONTAG STIFTUNG URBANE RÄUME, 2012; UTTKE, 2012). In recent research approaches, scholars have dealt with the emergence of knowledge in towns and cities (LISOWSKI, MEYER, SCHMIDT, SPITZER-EWERSMANN & WESSELMANN, 2011) and with enabling spaces (PESCHL & FUNDNEIDER, 2012). Common areas of research explored in the past decade in both education and planning science have included *Bildungslandschaften* [educational landscapes] (BOLLWEG & OTTO, 2011) and the interfaces between education

and urban development (KESSL & REUTLINGER, 2012; MILLION, COELEN, HEINRICH, LOTH & SOMBORSKI, 2017). [3]

In this article, we discuss how the refiguration of educational landscapes can be analyzed comparatively. By "comparing," we mean, firstly, comparing practices of comparison in different disciplines—if these differ, as in the case of educational research and urban planning—a common theoretical and methodological framework has to be found. Secondly, we conceive "comparing" as comparing different local contexts. In order to illustrate how both dimensions of comparison can be addressed when analyzing processes of refiguration, in Section 2, we discuss key theoretical concepts in researching educational landscapes, namely the concepts of local educational landscapes, leitmotifs and leitbilds as well as the educational campus. We will show that the actor-network theory (ANT) can provide a common theoretical and methodological frame for interdisciplinary analysis of the refiguration of educational landscapes. In Section 3, we introduce a mixed-methods design tailored at methodologically grasping the refiguration of educational landscapes: Changing leitbilds can be perceived by analyzing group discussions using the documentary method (Section 3.1). How users appropriate space and how atmospheres change at access points and transitions in educational landscapes can be addressed by narrative maps (Section 3.2). The campus as an educational space can be tackled by mixing several methods such as ethnography, sketches, photographs, 3D visualizations and standardized data and representing them in maps (Section 3.3). In Section 4, we discuss how this mixed-methods design can and has to be modified in cross-cultural research. We conclude the article with a discussion of the implications for the relationship between cross-cultural comparison and the refiguration of spaces in Section 5. [4]

2. Key Theoretical Concepts in Researching Educational Landscapes

2.1 Local educational landscapes

Lokale Bildungslandschaften [local educational landscapes] are long-term cooperative arrangements between different actors from a range of formal to non-formal child care, child support, youth work, and educational institutions at a local level. In the wake of the shock resulting from German children's mediocre performance in the Organisation for Economic Co-operation and Development's (OECD) Programme for International Student Assessment (PISA) in 2001, educational landscapes in Germany have received increased attention from both researchers and the public at large. Below-average results achieved by German pupils as well as an above-average dependence of school success on the social background of the children were confirmed in the PISA study. This resulted in several education reforms and the subsequent rethinking of the relevance of informal education inside and outside formal educational settings. Educational landscapes—also known as educational alliances or educational networks—link the various formal and non-formal educational settings in order to facilitate overarching educational processes (BUNDESMINISTERIUM FÜR FAMILIE, SENIOREN, FRAUEN UND JUGEND, 2005). In practice, this cooperation takes place primarily between schools and other institutions, such as child and youth

work facilities, and can vary greatly. One particular type of an educational landscape is the socio-spatial educational landscape (MILLION et al., 2017), which ties educational issues to a socio-spatial concept, thus linking education with aspects of urban planning and development. A look at other countries and regions of the world reveals similar connections between education and urban planning. The Educating Cities network is one such example. Originating from an OECD project in 1990, it now has 505 member cities in 34 countries whose aim is to promote lifelong learning in "educative cities (the city as educative because of its nature) and educating cities (when there is a conscious intention of teaching)" (BELTRÁN, 2012, p.51). In MILLION et al. (2017), we identified four *constitutive elements* that represent the common features of *socio-spatial educational landscapes* in Germany:

1. *Variety of participating institutions:* In addition to all-day school as a key institution, the spectrum of institutions involved includes, for example, organizations from the fields of early childhood education, child and youth work, cultural education, adult education, and health care. Cooperation is not limited to pedagogical-conceptual topics, but rather spatial relations between the institutions are also developed, for example by creating spatial proximity between the partners (pp.205-206).
2. *Different forms of organizational cooperation:* The participants see themselves as partners by creating structures that allow for long-term cooperation based on common goals. In most cases, non-formalized networks are formed with various forms of voluntary self-commitment, e.g., a common leitbild or a cooperation agreement (p.206).
3. *Pedagogical and urban planning aspects in the main concept:* A common feature of educational landscapes is that they have a combined concept that incorporates pedagogical and spatial aspects in their leitbild and goals—in particular, by looking at the examples that are spatially realized in terms of a campus. One aim of the campus is to provide attractive open spaces and, by creating a clearly defined physical space, not only to establish spatial proximity between institutions, but also to facilitate pedagogical and biographical transitions (p.207).
4. *Socio-spatial relations:* Within the conception and implementation of socio-spatial educational landscapes, space is understood as a central category and programmatically designed as part of the educational landscapes. This means, for example, that public spaces should be regarded as part of the campus or that spatial barriers should be overcome by connecting existing buildings with new architecture or by creating spatial connections through additional pathways. A key issue is often the process of opening up the educational landscape to the community as well as designing transitions between the campus and the neighborhood (pp.207-208; pp.212-215). [5]

In our study we showed that the institutional coordination of actors in socio-spatial educational landscapes is usually organized in the form of networks. Shared leitbilds map the network members' collective visions for the spatial and programmatic future and provide a strategic focus. These leitbilds are thus

constitutive parts of socio-spatial educational landscapes. Some of the socio-spatial educational landscapes that exist in Germany have formed a particularly intensive interface between education and urban development in the last ten years. This can be seen both in the form of institutional partnerships and networks—in educational and socio-political terms—and in spatial realizations—in terms of school architecture and urban planning. They often follow the ideal conception of the educational space as a campus. Although not fundamentally a new idea in school building, recent years have seen the campus regain acceptance as a particularly effective materialization of educational networks. [6]

As a particularly compact form of socio-spatial educational landscape, the educational campus offers an especially promising way to analyze both associated leitbilds and patterns of appropriation and use by children and young people. It is therefore the focus of our current interdisciplinary endeavor, with researchers from the fields of educational science and social work at the University of Siegen together with urban planners and designers at Technische Universität Berlin studying the development of socio-spatial educational landscapes within the research project "Der Campus als Leitbild und Praxis in Lokalen Bildungslandschaften" [The Campus as a Leitbild and Practice in Local Educational Landscapes] from 2019-2022, funded by the Deutsche Forschungsgemeinschaft (DFG) [German Research Foundation]. [7]

2.2 Leitmotifs and leitbilds

Our previous research project revealed four central leitmotifs—that is to say, recurrent themes—that are key to the formation of socio-spatial educational landscapes in Germany (MILLION et al., 2017):

1. *Centrality and centralization:* Often the school in cooperation with other institutions or several school facilities in close proximity to each other serve as a spatial center to share infrastructure and reduce barriers, especially to formal institutions (pp.209-212).
2. *Interweaving and interconnections:* A network between formal and non-formal (educational) institutions acts as a spatial interconnection between the various institutions to an educational landscape (pp.212-213).
3. *Access points and transitions:* Transitions are ensured by stakeholders and in the material design as low-threshold access to education and therefore discussed by stakeholders both in spatial terms and pedagogically in terms of educational biography (pp.213-214).
4. *Openings and closures:* School stakeholders need to be open up for other organizations as well as educational landscape stakeholders need to be open up for other users, for example, all age groups and the neighborhood (pp.214-216). [8]

These leitmotifs are not clearly delineated from one another, but rather overlap to some extent. Existing and planned, idealistic and spatial interdependencies between urban development and education are expressed through them. With

our current research, we have been again looking at educational landscapes—in particular those in the physical and programmatic design of a campus—based on the researched leitmotifs described above. Our aim is to explore how the campus as a vision of the future and as a leitbild within expert planning processes is created and what importance is assigned to it. Further blind spots on which we focus are the users of educational landscapes—especially students—, their perception of space, and the processes of appropriation that take place on campus (see Section 3). [9]

Researchers have formulated principles, key objectives, and concepts along most socio-spatial educational landscapes, including pedagogical and spatial targets, and have treated them in an integrated manner to some extent (COELEN, HEINRICH & MILLION, 2015). This is sometimes accompanied by identity-forming documents and artifacts—e.g., cooperation agreements, logos, journals, websites, social media presentations. GIESEL (2007) referred to these examples of shared hopes and visions for the future that are verbalized collectively as a leitbild. Such a leitbild provides a strategic focus for network members in an educational alliance and security with regard to their jointly formulated visions and development scenarios (JESSEN, 2005). In addition to their role as an image (orientation), leitbilds also have a guiding role (control) (KUDER, 2004). As a key coordination and control tool (ABEL, 2000), it is possible to underpin the emergence, stabilization, and capacity for action of networks by means of leitbilds. In addition to the formulated leitbild, the leitbild process itself also involves a communication and consensus building function and, closely linked to it, a legitimization function for the particular expert network. The purpose of the leitbild formulation process is to create common points of reference, understanding, and arguments as a way of facilitating and anchoring consensual decision-making (for an urban planning context, see ALTROCK, 2005; GOLDSCHMIDT & TAUBENEK, 2010; HEINRICH, 2013). [10]

Besides the leitbild-related research carried out by GIESEL (2007) and the technology research carried out by ABEL (2000) and DIERKES (1997), another significant leitbild-related research area is spatial planning (ARING & SINZ, 2006; KNIELING, 2006; KUDER, 2004; SCHÄFERS & KÖHLER, 1989; SPIEKERMANN, 2000; STREICH, 1988). Leitbilds are applied in spatial planning as instruments for mapping and discussing potential spatial developments (JESSEN, 2005), for future-oriented strategic orientation, and for developing physical and programmatic ideas. In education science, the term leitbild was introduced in the late 1980s and early 1990s and linked concepts of the leitbild from other disciplines and research contexts. In education science, leitbilds are also discussed as a tool for profile development and for quality assurance within institutions (LENZEN, 2001; MANDEL, 2006; PHILIPP & ROLFF, 1998; REGENTHAL, 1999). In addition to leitbilds, the concept of education and its various forms are also discussed widely throughout Germany, as we illustrate next. [11]

2.3 Research on educational landscapes

In its "Zwölfter Kinder- und Jugendbericht" [Twelfth Report on Children and Young People], the *Bundesministerium für Familie, Senioren, Frauen und Jugend* (BMFSFJ) [Federal Ministry for Family Affairs, Senior Citizens, Women and Youth] (2005) defined the consolidation of educational opportunities as an educational goal, thus encouraging mixed-use and the establishment of a coherent overall system of education. Many actors and networks, both at the national and local level and in local politics, expect these goals to be achieved by setting up an *educational landscape as a campus* in physical, material, and, as such, locatable form (MILLION et al., 2017). So far, only a dozen educational landscapes have been built, and several more are under construction. As a result, there is still no research on how and whether educational landscapes provide an adequate setting for students, educationalists, and other users in everyday life in order to realize the above-mentioned goals. An empirical examination of users and uses is relevant because, at the specific policy and scientific level, local educational landscapes involve first and foremost children and young people, with adults only being addressed to a lesser extent as users—though crucially as authority figures, e.g., parents, teachers, educators. While these actors are frequently taken into account in teaching and learning research—in particular in research on (all-day) schools (COELEN & STECHER, 2014; SPECK, OLK, BÖHM-KASPER, STOLZ & WIEZOREK, 2011)—, they have not been sufficiently analyzed in recent research work on educational landscapes. Very little is currently known about the perspectives of children and youth on campus (GRÄBEL, WÜSTENROT STIFTUNG & STUDIO FÜR URBANE LANDSCHAFTEN, 2015; MATTERN & LINDER, 2015). [12]

Another way of understanding educational landscapes is to see them as *spaces of extended (educational) control*. In the final report of our previous study, we concluded not only that it was possible to observe the increasing time spent by children and young people in educational and care institutions, but also their entire everyday life was increasingly marked by pedagogization (MILLION et al., 2017). This is underpinned by the leitbild of a campus, which expands pedagogical spaces both spatially and temporally across a large part of the day and, in the context of lifelong learning, over an entire biography. This may influence children and young people's perception and appropriation of space. MATTERN and LINDER (2015) commented critically on this concentration of diverse educational actors within an educational landscape. The joint effort of educators and urban planners and the realization of educational landscapes means not only better support for the individual, but also increased visibility and better control of the individual. At the same time, LÖW (2018, p.7) pointed to an *increased mediatization of the school environment*, describing it as a polycontextual behavioral setting while at the same time giving an example of how students simultaneously overlap different spatial references:

> "350 out of 477 schools in Hamburg have their schoolyards monitored by CCTV. At the territorial level, students communicate with other groups in the yard during break-time to distinguish or dissociate themselves; at the relational level, they communicate

> vis-à-vis some (schoolyard-)external control room from which they are observed; and digital media allow them to communicate with friends and family outside of school, sometimes even abroad. Thus, it is the schoolyard, rather than the surrounding neighborhood (which is unfamiliar to most, since they travel to school via the fixed trajectory paths of public transport), that represents the communicative hub within the students' urban network."[1] [13]

Consequently, a *pluralization and heterogenization of spatial references* has been taking place, which could provide a productive lens for us to observe young people's understandings and actions in educational landscapes. It could also allow us to study young people's use of socio-spatial educational landscapes. Furthermore, REUTLINGER (2011) warned—also from a spatial theory perspective—against the possible visibility and control of all areas of young people's lives. Since the 1980s, the modes of pedagogization and control have differentiated (CASTILLO, MILLION & SCHWERER, 2021): Children and adolescents are being pushed out of a growing number of spaces, either explicitly—e.g., by rules communicated through signs—or more subtly—e.g., by designs that make certain uses difficult. Moreover, by designing educational landscapes as a campus—e.g., arrangement, materiality, location—, planners and pedagogues can suggest certain uses and behaviors that they consider appropriate and discourage others. This development is headed in the direction of *exclusive, ascribed, pedagogized, specialized spaces for children and young people*—further examples are playgrounds, skate parks. Thus, these developments also represent a form of stabilization of child-dedicated and youth-dedicated spaces, although we can critically debate whether these spaces address the needs of children and young people or correspond to the preferences of adult actors instead. In this respect, the heterogenization and pluralization of children and young people's spatial references described above can represent a type of compensation or can make these spaces quite attractive. These developments relate to both institutional spaces, such as educational landscapes and other care facilities, and diverse public, semi-public, and private spaces alike (ibid.). [14]

This underlines the *need for user-oriented research on educational spaces and the inclusion of a refiguration perspective* as intergenerational and intra-institutional tensions can also be interpreted as refiguration conflicts (KNOBLAUCH & LÖW, 2020). Although researchers have yet to address the significance of the educational campus from the user's perspective, our study presented in this article can draw from a wealth of studies on how children and young people use learning environments (FRITSCHE, GÜNNEWIG, KESSL & REUTLINGER, 2013; HERLYN, VON SEGGERN, HEINZELMANN & KAROW, 2003; VON SEGGERN & STUDIO FÜR URBANE LANDSCHAFTEN, 2009). One inspiring approach to taking into account the campus level was outlined in the "My Campus" study (GOTHE & PFADENHAUER, 2010). In this study, the authors stated that the socio-spatial analysis of such places, where knowledge society is—or could be—proverbially *lived*, had long been neglected. The aim of

1 All translations from non-English texts are ours.

the study was to reconstruct the "interplay between lived and built space" (p.11) using explorative interviews and journals based on the example of the Karlsruhe Institute of Technology campus. First and foremost, the authors were able to provide answers to questions about the perception and use of the campus space and diversified university student needs and expectations. GOTHE and PFADENHAUER were also able to examine evaluation leitbilds and thus to represent what is commonly termed the *atmosphere* of space as an interlacing of multiple dimensions. [15]

Furthermore, in the case of socio-spatial educational landscapes, users and uses are embedded in a *reciprocal network of sociality and materiality*. Here, the educational theories of space are based on *the relational understanding of space* as characterized by LÖW (2001). According to this approach, space is constituted as a process through the ordering and figuration of social goods and people on the basis of linking and placement practices and thus manifests itself as a hybrid of material conditions and social use (LÖW & GEIER, 2014). Additionally, the quality of the physical-material environment influences social action, which in turn places demands on the physical space (GEHL, 1987). Form and structure, function, possibilities of use, and the—e.g., exciting, communicative—figuration and organization of a place influence the accessibility, appropriation, and intensity of use. The actors and uses of a campus therefore cannot be analyzed separately from the physical-material manifestation of space, but rather must be seen as embedded in a network of relationships consisting of people, actions, attributions, and spatial figurations. [16]

DEINET and REUTLINGER (2014) as well as ANDERSSON, REUTLINGER, ROTH and ZIMMERMANN (2019) focused on certain patterns of youth behavior and explained that *young people* created their own spaces by re-designating and changing spaces and situations. These processes can be seen as appropriation processes. The *appropriation of (educational) spaces* can be conceptualized using terms such as addressing, placing, and locating (NUGEL, 2014). In educational theories of space, scholars take into account institutional and individual spatial practices, including their preconditions, with a dialogical grammar, meaning they also consider individual or collective rejections of positionings. This involves both defining how education is shaped by spaces and how spaces are conceptualized as an educational process. In this sense, COELEN (2002) regarded spatial reference as individually configurable and therefore capable of being pedagogically motivated. DERECIK (2015, p.17) cited the concept of appropriation, "that fathoms human development not as an internal psychological process influenced to a greater or lesser extent from the 'outside', but understands developments as a manner of actively dealing with the environment." [17]

This concept was originally proposed by LEONTJEW (1964 [1959]). DERECIK went on to refer to HOLZKAMP and SCHURIG (1973), who further developed the concept of appropriation with regard to social connection and current social conditions. The operationalization of the appropriation dimension is important for the description and analysis of young people's activities in spaces—namely,

appropriation as an extension of motor skills, as an extension of the range of action, as changing situations, as a connection of spaces, as "spacing" and "achieving a synthesis" (LÖW, 2001, p.158). Another particularly original approach to exploring children and young people's perspectives on institutional places of learning in social space was used by GRÄBEL et al. (2015) who showed that—although educational institutions cannot replace everyday life in a neighborhood or village—schools nevertheless play a particularly important role in the development of educational landscapes in connection with a neighborhood, district, or region. Apart from international research on the spatial experience, perception, and demands of children and young people in urban contexts (GÜLGÖNEN & CORONA, 2015; LÚCIO, 2015; REUTLINGER, 2003), there are also studies on the function of material elements with regard to the child-friendly and child-appropriate design of (outdoor) play areas (LØNDAL, NORBECK & THORÉN, 2015) and on the significance of urban spaces for socialization during childhood and adolescence (DE VISSCHER, BOUVERNE-DE BIE & VERSCHELDEN, 2012). [18]

In the current theoretical debate on appropriation of spaces, spatial scientists go beyond the state of research outlined above and question the self-evident distinction between human actors—e.g., students—and material structures—e.g., architecture—, thus explicitly imagining materiality as an actor (HASSE, 2015). This is part of the material turn (NOHL & WULF, 2013) that has taken place in social and spatial sciences in recent years and the associated rediscovery of things and materiality as an epistemological dimension in educational science (PRIEM, KÖNIG & CASALE, 2012). Such an investigation of actors and uses takes place, for example, within the methodological framework of *actor-network theory* (ANT) and the theoretical approaches derived from it, such as assemblage research (FARÍAS & BENDER, 2010), in which material manifestations are regarded as effective actors in social processes. From a methodological point of view, the use of the heuristic concept of ANT makes it possible to overcome the dichotomization of human actors and non-human things and thus to empirically investigate the nexus between sociality and materiality. Theoretical and empirical work of this type—examples being DELITZ (2009) for sociology, NOHL (2011) for pedagogy or PINEDA (2010) for traffic systems research—has emerged on a both national and international scale, making it possible to perform in-depth analyses of the interrelationships between social and material structures in the context of the constitution of space in the field of education. All in all, the view that spaces/things enable social interaction/educational processes and *vice versa* seems extremely insightful, particularly since it appears to be sensitive to space (HÖHNE & UMLAUF, 2014). There are, however, currently only a few isolated empirical studies in which researchers deal with socio-material configurations within the context of educational spaces. [19]

3. Research Framework for Leitbilds and the Perception and Use of Educational Landscapes

The overarching goal of our research has been to analyze socio-spatial educational landscapes, both within their context of emergence and in an international comparison. We have used an interdisciplinary approach to explore the socio-spatial concept of the campus as an educational space in order to examine both the aspects of education and the aspects of urban planning and design. By employing various qualitative research methods, we have attempted to investigate the perspective of children and young people—through mappings combined with interviews and observation—and the professional actors—through group discussions and observations—of the campus and their visions to determine their internalized leitbild using a combination of qualitative methods. In addition, the researchers themselves have conducted a spatial analysis to gain a comprehensive picture of the materiality of space. Below we provide an overview of the different steps used to study educational campuses. We aim to demonstrate how we trace planning and pedagogical processes that take place in campus-like socio-spatial educational landscapes in selected German municipalities. In the next stage, we will attempt to achieve an internationally comparative perspective (see Section 4). [20]

3.1 Study of campus leitbilds

In our research, we follow the assumption that the development and establishment of leitbilds from local educational landscapes and the (further) development and capacity for action of expert networks of local educational alliances form "an interdependent process" (ABEL, 2000, p.170). Transferred to the educational landscape as a topic of research, this means that the significance of the central (urban planning) figure of the educational campus "is constituted at the outset in the shared preoccupation with leitbilds, in talking about them and [the] related actions" (GIESEL, 2007, pp.15ff.) of the actors or the author. We assume that it is possible to observe and reconstruct interdependent leitbild *processes* and expert networks in such educational alliances using local educational landscapes that meet the urban planning criteria for campuses. [21]

To this end, we will use *group discussions* in the various committees of the educational landscape. Depending on the campus, the number of committees varies widely, as well as the number of committee members varies from about five to twelve. We plan to research the committees that are thematically relevant to us, like those that deal with the pedagogical and spatial concept of the campus, or committees that encompass all institutions located on campus. After a discussion stimulus on the campus mission statement by someone from our research team, BOHNSACK (2010, p.106) says the discussion is largely left to its own devices to allow participants to negotiate the topic independently. We will analyze the group discussions using the *documentary method*. This method originated from the sociology of knowledge and the ethno-methodological tradition of research by MANNHEIM. It was developed by BOHNSACK for the analysis of group discussions in the 1980s and was soon integrated into various

disciplinary fields in Germany and gradually into English-speaking academic fields as well (BOHNSACK, PFAFF & WELLER, 2010). When applied to group discussions, the documentary method can be used to determine shared orientations of a group on the basis of common backgrounds such as gender, age, social milieu, or professional socialization. There are no actual shared experiences, but rather collectively experienced conditions. The collective orientations are first analyzed in terms of content with regard to "what" was said in the group discussion. This pertains to the reflective or communicative knowledge of the participants. This is followed by a change in the analysis attitude toward "how" in order to make the subjective and thus action-guiding knowledge of the respondents visible. Individuals are not conscious of this collective stock of knowledge (EVERS, 2009, §12). These subjunctive spaces of experience—independent of the subjectively intended meaning—form a structural context or collective knowledge context (BOHNSACK, 2003, 2010). "It is the change from the question what social reality is in the perspective of the actors, to the question how this reality is produced or accomplished in these actors' everyday practice" (BOHNSACK, 2010, p.102). Hence, the analysis of "what" becomes a formulating interpretation where the focus is "the decoding and formulation of the topical structure of a text," while the analysis of "how" involves a reflecting interpretation to find out "the framework of orientation" (p.111). [22]

As the study and therefore the group discussions take place in already existing committees and situations similar to those encountered in everyday life, they are particularly suited for "producing authentic attitudes and opinions" (LAMNEK & KRELL, 2016 [1988/1989], p.397). The aim is to determine the collective orientations of the group. In doing so, it is assumed that when people interact with one another, the same or similar experiences are manifested and these experiences are based on common experiential spaces independent of actual shared experiences. Different experiential spaces may overlay one another, permitting a multi-dimensional analysis (BOHNSACK, 2010). The particularity of the documentary method is the largely thematic self-determination of the group compared to other group discussion processes and the automatic nature of the discourse. Several surveys are carried out in each committee to identify orientation patterns in more than one study situation and to achieve reliable results (BOHNSACK, NENTWIG-GESEMANN & NOHL, 2013). Additionally, this process includes participating observations during regular committee meetings so that the results from the group discussions can be supplemented with observation protocols in order to learn the context of a topic. [23]

3.2 Study of appropriations and atmospheres of access points and transitions in educational landscapes

In our investigation of appropriations and atmospheres of selected places in educational landscapes, we have been addressing the subjective perspectives of children and young people on the educational campus. We have been focusing on *access points to the campus* and *transitions within the different campus areas*. Our previous research showed that the removal of material barriers—such as fences, walls, entrances and exits, non-direct or circuitous routes—was one way of meeting the already described urban planning and educational motifs opening up facilities—such as lecture halls, libraries, workshops, canteens, sports facilities—so that they could also be used by the local community outside school hours. Access points and transitions are of particular importance to children and young people because they also represent the transition from the regulated and supervised school grounds to the unsupervised neighborhood. Until now, it has been assumed that an appropriate physical design of entrance breaks down certain barriers—e.g., not entering or using a building because of what it represents—and gives the school as an institution the opportunity to present itself (HALFMANN & METZ, 2007). Entrance contexts mark the transitions and border spaces between inside and outside, between different subunits on campus and between the school campus and the neighborhood (on schoolyards see KLIKA, 2012). VON SEGGERN and STUDIO FÜR URBANE LANDSCHAFTEN (2009) established that young people met up and spent time in these boundary spaces in particular (also see the example of creating counter-cultural space through physical presence in LÖW, 2001). Our key research questions have been:

- How is the campus—as a whole and in its various parts—perceived and used?
- To what extent do material manifestations shape the spatial educational and appropriation behavior of individual social groups—e.g., cliques, parents, the elderly—and to what extent does this behavior in turn affect forms of materiality?
- What significance do individual social groups assign to access and transition contexts on the campus? [24]

Our aim has been to answer these questions by surveying campus users in *qualitative interviews*. Our focus is on young users between the ages of 14 to 18 and their behavior and perceptions since age-specific developmental tasks and behavioral patterns are attributed to these adolescents—e.g., dealing with changing schools and school transitions, extracurricular education, individual educational-biography and identity issues. From the perspective of spatial theory, our focus on this age group is based on studies that pointed, among other things, to the spatial interfaces between school and surrounding neighborhood as preferred places for young people (HERLYN et al., 2003; LÖW, 2001). [25]

In addition to the interviews with young people, we have been using mapping to visualize their perceptions of the campus. DAUM (2014) assumed that

(subjective) mapping not only reflects the perception of a space but also represents a subjective world view and appropriation as well as spatial memory structures. In addition, subjective or mental mapping is already being used in educational and planning science and is therefore suitable for our interdisciplinary research (MILLION, 2021a). One form of subjective mapping is the *narrative map* described by BEHNKEN and ZINNECKER (2013). This ethnographic process from visual social research allows researchers to reconstruct the "personal living spaces of the respondents and their subjective relevance" (p.547), as well as references such as events, places, and people beyond the local such as translocal or virtual spaces, which are relevant in young people's lives and can be addressed in mappings and narratives (MILLION, 2021a). In order to elicit a narrative map, the respondents are first encouraged to produce an improvised sketch of their own living space. The accompanying explanations are documented using recording equipment. The interviewers also make notes on the process. Once the respondents finished the task, immanent follow-up questions are asked to provide clarification and explication to topics discussed before. This is followed by an opportunity for exmanent questions, that are not related to the topics discussed so far (BOHNSACK, 2010, p.116). Usually, the sketching exercise and questioning is done in person. Due to the COVID-19 pandemic and the non-accessibility of educational buildings for researchers, we had to adapt this method to an interview situation and sketching exercise that is conducted with Zoom—a cloud-based video conference service (see Figure 1). This decision was also backed by methodological reflection. DOWNS (1985) emphasized that the researched person usually focuses on the representation of physical environmental attributes when sketching by hand on paper. In our opinion, this does not fully grasp the expanding spatial relevance of young people. The use of a digital sketching tool can motivate processes of visualization and has low-threshold accessibility for children (KRÄMER & PEEZ, 2015). In addition, the digital format makes it easier to modify drawings during the mapping process, which can also lower barriers to the drawing process (ibid., see also LE DÉ, GAILLARD, GAMPELL, LOODIN & CADAG, 2020). Figure 1 shows an example how the campus was drawn by a young participant as part of a narrative mapping exercise using a cloud-based video conference service. Colored lines mark places added after follow-up interview questions such as buildings, the boundary of the campus, and various routes onto the campus or paths on the campus before and during the pandemic. The symbols indicate, for example, places of special significance or places on the campus that are avoided.

Figure 1: Digital sketch map as part of a mapping exercise using a cloud-based video conference service. Please click here for an enlarged version of Figure 1. [26]

Narrative maps can be analyzed using various approaches depending on the research focus, for example, by coding and quantifying all spatial elements—places, paths, objects, boundaries, etc. Likewise, it is possible to analyze the manner in which the elements have been drawn and to consider their position within the drawing as a whole. The center of the analysis is the plausibility of a central axiom (BEHNKEN & ZINNECKER, 2013). An element located in the center of the narrative map, for example, may stand for its central significance in the lifeworld of the respondent. Objects that are represented in isolation or omitted may indicate a limited lifeworld or something similar. Another way of evaluating narrative maps is to compare them with official maps. In the case of our educational campus research project, for example, it is possible to compare the narrative maps with maps and spatial analyses prepared by the researchers, and to translate verbal information into maps. This makes it possible to identify precisely the unique characteristics of a subjective lifeworld. [27]

When interpreting maps and interviews, it is important to ensure that the reciprocal process of matching, intersecting, and embedding the variety of material produced—map and associated slides, transcripts, research notes, etc.—is comprehensible not only within the research team but also for other researchers. As data triangulation is appropriate to present the complexity of the lifeworld under examination, the reduction in ambiguity achieved by combining various types of data also simplifies interpretation. This consolidation of material should therefore be recorded in an academic source text that presents the material included in the triangulation, such as intermediate cartographic products created by comparing, transferring, or overlaying maps. Thus, the research question can be answered in a consistent manner. Interpretative conclusions are set out in a separate text; though the connection between the two texts must remain clear (ibid.). The comparison of narrative maps of the same educational landscape created by different respondents seems to be particularly relevant in the proposed campus project, as this would highlight subjective perspectives and thus individual lifeworld's within the same environment. [28]

3.3 Study of the campus as an educational space

In order to be able to depict comprehensive narrative maps spatially, they must be supplemented using spatial analysis methods. Our research framework allowed us to observe the social actions of users in the context of the material-physical conditions of a local educational campus, thus contributing to the understanding and analysis of the (re-)production of a socio-material reality. To establish the connection between sociality and materiality, it is necessary to systematically collect both quantitative and qualitative spatial data (DANGSCHAT & KOGLER, 2019 [2014]). We decided to proceed in two steps, as suggested by educational research on materiality in educational processes (NOHL & WULF, 2013). [29]

In the first step, we conducted a spatial analysis of the physical (urban) design and architectural conditions of the campus to capture the complexity of the physical-material dimensions of campus development (CURDES, 1997 [1993];

REICHER, 2017 [2012]). To identify different aspects of the physical-architectural conditions and spatial features of the campus, we captured the following *aspects of the spatial features* by means of *mapping* (MILLION et al., 2017, p.215; REICHER, 2017 [2012], pp.163-165; ZINKE, KLEPP & BILJAN, forthcoming):

- the integration or demarcation of the campus into/from the *surrounding neighborhood*;
- the *building structure* as well as the *access points and transitions between indoor and outdoor spaces*—including building typologies and configuration, façade design, visual relationships, interruptions;
- *territoriality and formation*—of green and outdoor spaces including public/semi-public/private spaces, accessibility, furniture;
- *patterns of use and appropriation*—e.g., paths, routes, informal meeting places;
- *accessibility*—e.g., public transportation, function and hierarchy of streets and pathways;
- the *interconnectedness of the campus*—e.g., pathways and sight lines, permeability and barriers, entry, exit, and transition areas, fences/gates/walls.

Figure 2: Sketches, photographs, and 3D visualizations showing spatial structure of a campus. Please click here for an enlarged version of Figure 2. [30]

Sketches, photographs, and 3D visualizations have been produced of the campus projects. This makes it possible for us to carry out a more *in-depth analysis and representation of the physical-material dimensions*. Figure 2 provides an example of such visualizations. This illustration shows a site map and spatial features of the campus, for example, access points, transitions, green and outdoor spaces, etc. Notes, photographs, and sketches are useful for *mapping and documenting the site and its physical-material characteristics*, as well as capturing *atmospheres, patterns of use and the activities taking place*. Therefore, in the second step, qualitative spatial data (DANGSCHAT & KOGLER, 2019 [2014]) are collected and recorded as maps and sketches. Socio-spatial artifacts are recorded as subjectively perceived, establishing a link to LÖW's sociology of space (2001). It is important to grasp the local conditions with all senses and not just by seeing, which is achieved using associative perceptual walks (SPENGEMANN, 1993). To avoid falling back on a-priori typologies that entail a different perception and evaluation (cognition) of social space (DANGSCHAT &

KOGLER, 2019 [2014]), the study included the detailed description, mapping, and analysis of the materiality of architectural artifacts (NOHL & WULF, 2013), as illustrated in Figure 2. [31]

Both the analysis of the *embedding of the senses in an everyday context* (LUEGER, 2000) and the *treatment of artifacts* (FROSCHAUER, 2009; LUEGER, 2000) allows a multi-perspective approach in further phases of the study. Our study focused on access points and transitions on local educational campuses and their logic (BERKING & LÖW, 2008). One example would be architectural artifacts as central elements of mediation between inside and outside, between the private and public spheres, between institutionalized and non-institutionalized space, and other spaces that act in this way symbolically, materially, and in relation to the site at the same time (STEETS, 2015). In order to document development processes in connection with built realizations, we conducted such analyses in a standardized form both at the beginning of the two-year field phase and will conduct it at the end. Based on these spatial analyses, it is possible to take into account processes of exchange between people and things themselves (NOHL & WULF, 2013). Drawing on *ethnographic field research*, this involves participatory observations (FRIEBERTSHÄUSER & PANAGIOTOPOULOU, 2013; TERVOOREN, ENGEL, GRÖHLICH, MIETHE & REH, 2014), which make it possible "to record remnant and partial practices which, though very difficult to grasp linguistically, are central to the constitution of new hybrid actors (and so of new sense)" (NOHL & WULF, 2013, p.7). With regard to the use of spaces, focus is placed on interactions between physical-material characteristics, possible uses, and the activities that take place—e.g., sitting, walking, driving, standing, reading, talking, etc. Connections are sought by distinguishing between different—necessary, voluntary, and resulting—activities and the characteristics of the physical environment (FRITSCHE et al., 2013; GEHL, 1987) and then evaluated in relation to the goals defined in the planning phase for both individuals and communities (ENGESTRÖM, 2014 [2010]). The appropriation of space depends on the readability and understanding of the spatial environment, and both are basic prerequisites for social action (WOLTER, 2011). We therefore have been operationalizing the appropriation dimension in the form of actions (DEINET & REUTLINGER, 2014; DERECIK, 2015). In a subsequent step, the observed data will be interpreted in terms of interactions between spatial materialities and activities. Another aspect of our research is transformation, meaning the possible mutations and changeability of places and spaces. The function, characteristics, and meaning of campus facilities change over time as a result of the actions of their users on the one hand and local-government strategies on the other (GOTHE & PFADENHAUER, 2010). [32]

One methodological challenge in connection with our research program is to *capture the campus in its refiguration*, that is, in its constant change. Similar to buildings, campus areas and buildings under construction, as well as completed campus areas with their buildings, are, in the words of LATOUR and YANEVA (2008, p.80), a "moving *project*" since the campus as a built space "is transformed by its users, modified by all of what happens inside and outside." We have been addressing this modification over time by mapping and analyzing the

materiality of architectural artifacts at the beginning and end of the field phase to make changes visible (see Figure 2). According to LATOUR and YANEVA, the 3D-CAD visualization "of a project is [...] utterly unrealistic" (pp.81-82) due to the challenge of having to depict a multitude of dimensions, such as legal and urban planning conditions that are difficult to represent or the contradictory requirements of the many actors or users that a purely quantitative representation cannot take into account. In accordance with the actor-network theory (ANT), we do not wish to make an epistemological distinction between individuals—children, young people, adults—, social groups—cliques, organizations, families, etc.—, and material opportunity structures—pedagogical architecture or urban planning measures—in our observations. In our research project, material e.g., entrances and exits, fences, non-direct or circuitous routes, etc.—have been considered active, acting elements in the constitution of educational spaces and categorized as equally effective actors alongside social manifestations (CALLON, 2006; LATOUR, 2006). In fact, these forms of articulation are regarded as equally important: "the free association applied in the research approach towards all identifiable actants and the analysis of the inclusions and exclusions yielded produces more than just surprising findings on the distribution of actor power" (FÄRBER, 2014, p.100). The recourse to ANT as a heuristic framework also allows us to overcome the separation between spatial science and educational science approaches to socio-spatial contexts in local educational landscapes observed to date and to adopt an interdisciplinary research perspective (FÄRBER, 2014; HÖHNE & UMLAUF, 2014). For this reason, we have been using ANT as a reference theory for our observations only. For interviews and group discussions we have been using BOHNSACK's (2003, 2010) documentary method as our methodological framework. [33]

The aim of the present study is to provide a *comprehensive coverage and explanation of our research object: the refiguration of socio-spatial educational landscapes in the context of Germany*. This approach requires us to triangulate not only methods but also data to cope with the complexity of different data forms and perspectives (ACKEL-EISNACH & MÜLLER, 2012). The aforementioned methodological diversity enables us to take a comprehensive look at German educational landscapes that are spatially realized as a campus in order to do justice to their spatial, educational, conceptual, and cooperative interconnectedness. Therefore, it is useful to first specify the constitutive elements of socio-spatial educational landscapes in Germany to better understand them and concretize the research object, as in the current research project. This enables us to assess their characteristics in an international comparison in a next step, for example, within another research project. The following section shows some considerations in this regard. [34]

4. Refiguration of Educational Landscapes and Application of Methods in Cross-Cultural Studies

When analyzing the concept of the socio-spatial educational landscape from an international perspective, we are faced with the challenge that educational landscapes are already difficult to grasp in the German context due of the variety of physical forms and programmatic actions. In our study, we therefore purposefully chose a methodological design that focuses on long-term cooperation between multi-professional actors and institutions in terms of education and includes a spatial differentiation and materialization of formal and informal educational settings from the perspective of the learning subject (BLECKMANN & DURDEL, 2009). The socio-spatial educational landscapes as a campus described in this article, and as we find them in Germany in some towns and cities, are not likely to be found in this particular form in other countries. For example, educational landscapes might differ concerning the variety of participating institutions, the forms of organizational cooperation, pedagogical and urban planning aspects in the main concept and socio-spatial relations. Often only some of these variables are present, such as collaboration between a school and other institutions. A combined pedagogical and spatial concept as discussed in Section 2 is quite rare. If we consider the idea of educational landscapes in a different cultural context based on our previous research, we are confronted with a methodological and interdisciplinary "blind spot." According to BAUR, HERRING, RASCHKE and THIERBACH (2014, p.13), these blind spots should be given special attention in research in an international context:

> "This is especially important in order to distinguish necessary perspectives from prejudices and other variants of partiality that distort research because researchers are so entangled in their own value system that they systematically misinterpret or even peculate data. Researchers are particularly prone to prejudices and blind spots when researching a culture other than their own (i.e. a set of time-space coordinates foreign to them)." [35]

Internationally, we encounter different framework conditions under which educational landscapes are created and can therefore take on different socio-spatial forms. To implement our research design internationally, as researchers, we have to be much more open to different educational settings and look less at the international differentiation of educational settings with our previous (national) understanding of an educational setting. Nevertheless, based on the refiguration of spaces, we can trace circulations of pedagogical concepts and education space designs to guide our search. At the same time, it is necessary to embrace variations and contradictions as they help us avoid the blind spots discussed before. It is clear to us that this results in a methodological contradiction, which we will elaborate on in Section 4.2. Before doing so, we will explain in Section 4.1 the general conditions in which educational landscapes are embedded internationally according to the current state of research. [36]

4.1 Challenges for conducting cross-cultural research on educational landscapes

Historically, education science and planning science have been separated at both the national and international level and school development has been a topic long ignored in urban planning science (VINCENT, 2006). However, international studies both confirm the crucial role of educational institutions in social urban development and regeneration (ANDRÉ, CARMO, ABREU, ESTEVENS & MALHEIROS, 2012) and illustrate the blurring geographic, institutional, and policy boundaries surrounding schools. This fuzziness is expressed not least in the current development of educational landscapes. This development is essentially, but not exclusively, due to developments in schools. Although we can observe an international trend in education (CUMMINGS, 2011; DYSON, 2011), there is nevertheless a *lack of consistency in the terminology* used, such as "academy schools" (UK), "community school" (Australia, Canada, UK, USA), "full-service and extended school" (UK), "open school" and "broad school" (Netherlands) or "city educational project" (Spain). DYSON (2011, p.181) defined the similarities between these concepts as follows: "they have to acknowledge and engage with the wider social and service contexts within which they are located, and the family and community contexts within which their students live and grow." SMITH (2010 [1996]) argued that these schools were characterized by their openness to their local communities—both in terms of the curriculum and the building structure—and their collaboration with other partners in the areas of sports, culture, health, and social services. He also used the term "campus" to describe the sum of their facilities. However, as KEMP (2015, p.91) pointed out, the term "community school," for example, is used in many different ways around the world today:

> "[I]n Australia it describes independent schools that serve a particular community group such as Aborigines, in the UK the majority of state-run schools are referred to as 'community schools' and in the U.S. it describes a small proportion of public or private schools that become centres of the community and are open to everyone—every day, evenings and weekends. The U.S. description of 'community schools' is perhaps closest to an ideal that is currently being called for in many school building programs. New school buildings are seen as an opportunity to unite students and communities through openness, shared facilities, lifelong education and local partnerships." [37]

In some countries (e.g., Sweden), schools have traditionally been so closely linked to their community or community work that no specific terminology is used. However, there have also been efforts more recently to design school buildings in a way that creates a mutually beneficial relationship between school and community, like a school near Gothenburg (Sweden), which is part of a larger community building (KEMP, 2015). In contrast, these developments are explicitly encouraged in other countries by means of corresponding programs, such as the SchoolPLUS leitbild or the "Neighbourhood of Learning" program in rural areas of Canada (CUMMINGS, 2011). The UK-wide "Building Schools for the Future" (BSF) and "Academy Schools" programs, dating back to 2004 to 2012—which slowly came to an end after a budget cutback was imposed in 2010—, aimed to

improve failing schools and promote urban regeneration—as they were mostly situated in troubled neighborhoods—by transforming the education system with the renewal of all secondary schools in the UK (CHILES, 2015). In some of these reform programs around the world—this applies to Scandinavian countries such as Denmark, Finland, and Norway, as well as to the UK and the USA—it is characteristic for attempts to be made to experiment with new spatial arrangements influenced by new learning paradigms when designing the educational space. This new learning paradigm includes aspects such as "personalisation of curricula, student-centred learning and curricula based on project work," in order to offer more freedom in terms of how and where one learns (p.20). The "Gentofte" program, a local program in Denmark, for example, assumes "that the children's learning is strongly influenced by the quality of space" and that "everyone learns differently" (p.17). [38]

These developments are usually scientifically monitored and evaluated when it comes to support programs. The "service and extended schools" in the UK are evaluated in terms of outcomes and impact, including cost benefit (CUMMINGS, 2011). DYSON (2011) studied the interaction between "community schools" and their local communities. DYSON too, however, came to the conclusion that many schools that developed into educational landscapes were neither labeled nor documented and monitored as such. Based on a literature review, BLACKMORE et al. (2011) stressed that there was little empirical work on how new built learning environments were perceived by students, teachers, and others, or to what effect they were used. In addition, TSE, LEAROYD-SMITH, STABLES and DANIELS (2014), for example, provided a critical analysis of the BSF program in the UK, examining how strategic visions of education had been developed and translated into material spaces in new school buildings within the BSF program, as well as how design processes impacted children and young people's experiences of the school environment and education. A common thread running through much of the available research is that the dimension of *physical space is seen only as a static background*. [39]

Nevertheless, during the current COVID-19 crisis, nearly all recreational and schooling activities have been temporarily relocated to the homes. Educational networking within educational landscapes seems to be on hold. While children and young people normally grow up in a mixture of outdoor spaces, family, educational landscapes, and virtual worlds, they are currently doing so at home and potentially with the help of online tools, which are being used by schools to a much greater extent than before. Instead of conquering spaces and constituting new places of play and encounter through networking, *mediatized worlds* are penetrated by educational institutions more clearly than ever before. Smartphones, tablets, and computers are becoming indispensable teaching tools. Their portability is taking on a secondary role, as teaching via these media devices has necessarily been taking place at home, in the kitchen, in the living room, or in the children and young people's bedrooms since schools in Germany and other European countries were closed due to COVID-19 in mid-March 2020 and several other times thereafter. There are similar situations in other countries, albeit with some differences. But overall, educational campuses have been and

are being closed, partly temporally and physically, almost everywhere. As a consequence, educational landscapes have also manifested themselves more as mediatized educational spaces. Because of these processes, we expect a change to take place in the subjective spatial experiences of the individuals who are involved in this temporary refiguration of educational spaces. In addition, as educational landscapes and the pedagogization of spaces are a global phenomenon, which is also spread by design practices circulating worldwide (CASTILLO et al., 2021), the refiguration of educational landscapes on an international level and international comparisons are in need of research. The first step toward researching the *refiguration of educational landscapes in an international context* will be, as explained below, establishing criteria that define them at a more abstract level. At the same time, from this international perspective, the following *challenges* arise for our investigation.

1. We are faced with the challenge of *defining education in an international context*. In this respect, we may be dealing with different contexts in which education plays an important role, but there may be different understandings of education, different debates on education, and different strategic visions of education, while education may also be structured and institutionalized differently at the national level (REICHERTZ, 2021).
2. The lowest common denominator we are looking for is a kind of *cooperation between different actors, different school-related professions*. How do these different interests come together, especially with regard to a common pedagogical concept, and what spatial forms do they take?
3. The next step, therefore, is to ask *how different strategic visions of education materialize spatially in an international context and how they can be traced in cross-cultural research*. According to the current state of research, we have already identified international similarities in the way *spatial connectivity, accessibility, and transition* have been discussed in education and urban planning.
4. Following this, we can look for variations and contradictions in the *leitmotifs* (see Section 2.2).
5. The challenge here is to empirically reconstruct the *effects of the national context on the spatial manifestation of education*, while at the same time reconstructing the commonalities and coherences or differences between national educational policies. [40]

Again, it proved beneficial to use the refiguration of spaces as a background to understand some of these commonalities and coherences or differences. If the refiguration of spaces is meant as a process-like transformation of spatial arrangements and interdependencies, the development of educational landscapes can be seen as one example that takes on built form, influencing pedagogical concepts and the use and perceptions of space. The central leitmotifs of educational landscapes presented above could also be understood as qualitative characteristics of the refiguration, which are circulating at least nationally. [41]

4.2 Reflection on the suitability of methods in the international context and within the framework of a cross-cultural study

To investigate educational landscapes in several countries with very different framework conditions, it was first necessary to embed our project in the context of cross-cultural research. It is worth noting that the terms "cross-cultural" and "intercultural" are often used interchangeably in the literature, but in reality, there are conceptual differences. In line with OTTEN et al. (2009), we can define differences as follows: "Cross-cultural research [and communication] involve[s] comparing behaviour in two or more cultures [...]. Intercultural research [and communication] involve[s] examining behaviour when members of two or more cultures interact" (GUDYKUNST, 2000, p.314, cited in OTTEN et al., 2009, §4). This raises the question of how we can capture the educational debates and different trends in several countries in order to compare them in terms of—in our case—cross-cultural research. What methodological challenges do we face in this context? The particular feature of qualitative methods, which are used both in the survey and in the evaluation, is that they also work for international research since they allow for an open approach. These methods can therefore be applied without particular problems in an intercultural field, although certain qualitative techniques such as interviews and group discussion formats may be unfamiliar or completely foreign to actors in other countries, which must be taken into account in the data collected (REICHERTZ, 2021). The hurdles we face in international research are of a more general nature, such as language barriers, which do not depend primarily on the methods we choose, but rather on the general conditions in an international context. Furthermore, cross-cultural aspects are relevant for the interpretation of the data. Another aspect to consider is the difference between remote interviews and face-to-face interviews. The former pose some challenges in terms of the interviewer-interviewee relationship and the data interpretation, which can be more difficult (GRUBER, EBERL, LIND & BOOMGAARDEN, 2021). This also applies to interviews in Germany in times of COVID-19. [42]

In order to gain access to the research field in various countries, it is necessary to contact local experts in the educational and urban planning sector. As native speakers themselves or with contact to native speakers, they are paramount because the "role of language is fundamental in cross-cultural and intercultural qualitative research" (ANEAS & PAZ SANDÍN, 2009, §40). Native speakers are not only relevant for interviewing the target groups and moderating the group discussions, but also for evaluating the planned procedures with regard to their "adequacy, appropriateness, and consistency in light of the theoretical framework of the qualitative approach" (GATTI & ANDRÉ, 2010, p.48). Hence, it is necessary to train native speakers thoroughly in the methods of qualitative research to be applied, so that they are not only able to apply the methods themselves, but also to assess their appropriateness. In addition, when it comes to narrative maps used to investigate the perspective of users in an internal context—e.g., children and young people—, the low-threshold accessibility of a digital sketching tool (KRÄMER & PEEZ, 2015) also applies to a cross-cultural context. Nevertheless, it is essential to adapt the sketching exercise and

questioning in advance both to a digital format and to the native language of the respondents. [43]

At the same time, it is necessary to work with local actors who are able to support the research process in terms of formal matters, introducing the respondents to the method and digital toll, while also providing technical support or helping with technical problems. If the research design is adequate, the researchers can begin conducting the surveys. Afterward, help is still needed with transcribing the text and translating it into English or into the language shared by the researchers and native experts. This is important to establish a joint basis for the common interpretation of data because such a process "requires an acknowledgment of the complex, multiple, and contradictory identities and realities that shape [...] collective experience" (ANEAS & SANDÍN, 2009, §45). [44]

The same applies to the analysis of documents as a supplement to the group discussions in order to reconstruct international leitbilds. Working with local experts—for example, in a research workshop to analyze the data—makes it possible for us to transfer the gained knowledge, which can be helpful to create "new hypotheses for studying the same problem in similar contexts" (GATTI & ANDRÉ, 2010, pp.49-50). Here, context means understanding and investigating the social phenomenon. Therefore, the meaning of an action or statement, which is defined by the involved social actors themselves, is interpreted by our cultural position and from the point of view of the experts from the corresponding country. This can lead to different interpretations and analyses during the process (ANEAS & SANDÍN, 2009). Using these different perspectives to generate knowledge, reflect on one's own cultural bias, and avoid blind spots is one of the greatest challenges in the evaluation process. EVERS (2009, §31) stated that the "documentary method appears to be especially suitable for preventing possible ethnocentrisms in the interpretation of data in reconstructive research, as well as for precluding concessions with a statistic and normative cultural concept." EVERS justified this via the case comparison in an early interpretation and the detection of the comparative knowledge vis-à-vis the habitus of the researcher. In this context, case refers to the social phenomenon of interest such as individual actors. Even though the documentary method seems suitable for international contexts, NOHL (2017) pointed out that a country comparison could nevertheless be complicated due to the many challenges involved. [45]

5. Conclusion: Challenges for Studying the Refiguration of Educational Landscapes Comparatively

The aim of this article was to examine how educational landscapes in Germany and internationally could be studied with regard to the perspectives of users, especially children and young people, as well as the perspectives of professionals in order to investigate the leitbild of an educational landscape in the form of a campus. Therefore, we used narrative maps created by BEHNKEN and ZINNECKER (2013) to explore children and young people's perspective on a campus, which were effective in Germany and on an international scale, combined with observations and interviews. The actor-network theory (ANT) seemed to be a promising approach for this. In addition, we used the documentary method developed by BOHNSACK to study the perspective of professionals through group discussions and observations. For both parts, the perspective of the users and the professionals, several things should be taken into account in an international context, although all methods can be used both in Germany and internationally.

- The basis for all methods is a *common spoken language*. Hence, we used our contacts to researchers in other countries who could conduct the surveys or help us perform them ourselves.
- However, we would need *international research* groups not only for collecting data, but for interpreting the data in order to understand the cultural context and draw the right conclusions.
- Particularly with regard to leitbilds*,* we may find major *differences between Germany and other countries*. Educational landscapes in the form of a campus are a very specific approach in Germany, combining a variety of participating institutions, different forms of organizational cooperation, pedagogical and urban planning and design aspects in the main concept, and socio-spatial relations. We would expect that only some of these variables would be present in an international context, even if we see similar (spatial) demands for educational landscapes at an international level in the programmatic terms, such as low-threshold accessibility and transitions between the campus and the community, as well as the involvement of the neighborhood. [46]

COVID-19 has also posed some specific challenges, for example, in terms of virtual media. So far, this has not been considered in the debate or programming surrounding educational landscapes. Thanks to *digitization*, we can also access subjects to which we did not have had access before. This applies, for example, to creating digital narrative maps and conducting interviews without having to be on site. Nevertheless, we need partners who can grant us access to participants in other countries. [47]

At the same time, COVID-19 has been leading to several problems in our actual research because we could not really research the use of space. The young people we have been interviewing have not and will not been able to use the

space themselves without restrictions for a long time, which can change the research results and must be taken into account in the evaluation. In light of the cross-cultural research challenges we discussed before, it is essential that our research also harness the momentum offered by the *refiguration of educational landscapes sparked by the COVID-19 pandemic*. The political debate regarding COVID-19 in Germany has been dominated by several different issues, including the question of how and when schools (not only educational landscapes) will reopen as specific places where knowledge and skills are acquired in the knowledge society. These discussions tend to treat educational institutions as individual providers rather than as a network. For example, some have suggested that schools should be reopened gradually, but most people do not expect normal (though possibly quite different) teaching to resume in schools before 2022. Although national and international educational landscapes have been developed in recent years as places of learning and living within the framework of all-day schooling and neighborhood and city development, it seems that this development is being slowed down, at times even pushed backward, by health precautions and the self-concentration of educational institutions on their own functioning within their own buildings and adjacent courtyards (rather than attempting to cooperate with others and take advantage of the spatial context) (MILLION 2021b). Outdoor space is being divided up and sectioned off with new boundaries to set distances and define patterns of interaction. It will indeed be interesting to see how educational landscapes are mediated and redefined after this pandemic period, which will almost certainly make cross-cultural studies in the field even more challenging. [48]

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